

PATENT COOPERATION TREATY

In application of

HONGRIM TRADING CO., LTD

International Application No.:

PCT/KR2003/002609

International Filing Date :

November 29, 2003

For: GINSENG FERMENTED BY LACTIC ACID BACTERIUM,
YOGHURT CONTAINING THE SAME AND LACTIC ACID BACTERIA USED
IN THE PREPARATION THEREOF

AMENDMENT UNDER ARTICLE 34

IPEA/KR

Korean Intellectual Property Office

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Applicant is submitting the following amendment under Article 34 in response to Written Opinion of November 29, 2004. Replacement pages 31-32, which incorporate the amendment, are submitted herewith.

THE AMENDMENT

In the Claims :

1. (Amended) Lactic fermenting products of ginseng prepared by the fermentation of ginseng with lactic acid bacteria capable of bio-converting ingredients of ginsenosides.
5. (Cancelled)
6. (Amended and Renumbered to Claim 5) Lactic fermenting products of ginseng as claimed in claim 1 or claim 2 wherein said lactic acid bacteria may be at least one selected from the group of bifidobacterium K-103, bifidobacterium K-506,

bifidobacterium cholerium KK-1, bifidobacterium minimum KK-2, bifidobacterium H-1 and bifidobacterium KK-11.

7. (Renumbered to Claim 6) A ginseng yoghurt comprising lactic fermenting products of ginseng as claimed in claim 1 or claim 2.
8. (Amended and Renumbered to Claim 7) The ginseng yoghurt as claimed in claim 6 wherein lactic fermenting products of ginseng are incorporated into said ginseng yoghurt through the fermentation process wherein both milk and ginseng are fermented together.
9. (Amended and Renumbered to Claim 8) The ginseng yoghurt as claimed in claim 7 wherein said lactic acid bacteria may be at least one selected from the group of bifidobacterium K-103, bifidobacterium K-506, bifidobacterium cholerium KK-1, bifidobacterium minimum KK-2, bifidobacterium H-1 and bifidobacterium KK-11.
10. (Amended and Renumbered to Claim 9) The ginseng yoghurt as claimed in claim 6 wherein said lactic acid bacteria can suppress the intestinal harmful bacillus and/or suppress the activity of the intestinal harmful enzyme and/or to suppress the proliferation of cancer cells.
11. (Amended and Renumbered to Claim 10) Bifidobacterium KK-1(KCCM-10364).
12. (Amended and Renumbered to Claim 11) Bifidobacterium KK-2(KCCM-10365).
13. (Amended and Renumbered to Claim 12) Bifidobacterium H-1(KCCM-10493).

REMARK

Claim numbers indicated below refer to those in the claims of PCT publication unless indicated otherwise.

- Claim 1 is amended to incorporate the content of Claim 5 where the lactic acid bacteria are specified to those capable of bio-converting ingredient of ginsenosides. Said amendment to Claim 1 is intended to overcome the lack of novelty over Japanese Laid Open of Patent Application Pyung5-84065 cited in written opinion. In this regard, Claim 5 is cancelled and Claim 6 is amended to depend from Claim 1 or 2. Further, Claims 6-13 are renumbered to Claims 5-12 (refers to renumbered claim), respectively, to reflect the cancellation of Claim 5 and referenced claims thereof are changed accordingly.

Also, "collerium" in Claim 6 and "bifadobacterium" in each Claims 11 to 13 are clerical errors for cholereum and bifidobacterium, respectively and thus corrected accordingly in each of corresponding claims. The terms, cholereum and bifidobacterium are terms that a skilled person in the pertinent art would understand without difficulty and such changes are supported by the detailed description (for example, see page 7 lines 15-24 of PCT publication).

Respectively submitted,

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WHAT IS CLAIMED IS:

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1. Lactic fermenting products of ginseng prepared by the fermentation of ginseng with lactic acid bacteria capable of bio-converting ingredients of ginsenosides.

5. 2. Lactic fermenting products of ginseng as claimed in claim 1 wherein said ginseng is selected from the group consisting of dry ginseng powder, ginseng treated by acid, ginseng treated at high temperature and ginseng treated under pressure.

10 3. Lactic fermenting products of ginseng as claimed in claim 1 or claim 2 wherein said lactic fermenting products of ginseng comprises at least one ingredient selected from the group consisting of Compound K(20-O- β -D-glucopyranocyl-20(S)-protopanaxadiol), ginsenoside Rh1 and ginsenoside Rh2, and Δ^{20} -ginsenoside Rh2.

15 4. Lactic fermenting products of ginseng as claimed in claim 3 wherein the total amount of (Compound K+ginsenoside Rh1), (ginsenoside Rh1+ginsenoside Rh2), (ginsenoside Rh2+ Δ^{20} -ginsenoside Rh2+ginsenoside Rh1) or (Compound K+ginsenoside Rh1+ginsenoside Rh2) is respectively in the ratio of more than 0.1 with respect to the amount of (ginsenoside Rc+ginsenoside Rd+ginsenoside Rb1+ginsenoside Rb2+ginsenoside Re+ginsenoside Rg1).

20 5. Lactic fermenting products of ginseng as claimed in claim 1 or claim 2 wherein said lactic acid bacteria may be at least one selected from the group of bifidobacterium K-103, bifidobacterium K-506, bifidobacterium cholerium KK-1, bifidobacterium minimum KK-2, bifidobacterium H-1 and bifidobacterium KK-11.

25 6. A ginseng yoghurt comprising lactic fermenting products of ginseng as claimed in claim 1 or claim 2.

30 7. The ginseng yoghurt as claimed in claim 6 wherein lactic fermenting products of ginseng are incorporated into said ginseng yoghurt through the fermentation process wherein both milk and ginseng are fermented together.

8. The ginseng yoghurt as claimed in claim 7 wherein said lactic acid bacteria may be at least one selected from the group of bifidobacterium K-103, bifidobacterium K-506, bifidobacterium cholerium KK-1, bifidobacterium minimum KK-2, bifidobacterium H-1 and bifidobacterium KK-11

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9. The ginseng yoghurt as claimed in claim 6 wherein said lactic acid bacteria can suppress the intestinal harmful bacillus and/or suppress the activity of the intestinal harmful enzyme and/or to suppress the proliferation of cancer cells.

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10. Bifidobacterium KK-1(KCCM-10364).

11. Bifidobacterium KK-2(KCCM-10365).

12. Bifidobacterium H-1(KCCM-10493).